

# BRAZORIA COUNTY ECONOMIC RESILIENCE PROFILE

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## Introduction

Economic resilience is the ability to withstand and prevent disruptions to the economy. The most common types of disruptions include downturns in the economy or in a key industry; the exit of a major employer; and natural or man made disasters.

Creating a resilient economy requires the ability to anticipate risk, evaluate how risk can impact economic assets, and build the capacity to respond to disruptions.

This profile is intended to provide an overview of the factors affecting the future growth, development and resilience of Brazoria County and it's economy by providing key data points on the economy, demographics, and other useful information.

## Brazoria County Boundaries

-  Brazoria County
-  Other counties
-  Top 4 cities
-  Major roads

County Seat: Angleton  
Largest City: Pearland



# Brazoria County Overview

Brazoria County's robust economy is geographically divided between petrochemical production in the Brazosport area in the southern portion of the county; public services and banking in the mid-county/Angleton area; and burgeoning residential construction, retail, and medical services sectors in the suburban northern portion of the county, including Pearland, part of the Houston metropolitan area. Brazoria County is on Texas' coastal plain, stretching from the City of Houston to the north to the Gulf of Mexico to the South; drained by the Brazos and San Bernard rivers.

Brazoria County is growing rapidly. According to U.S. Census estimates, the population has increased by 46% since 2000. The majority of this growth occurred in the northern portion of the county, with Pearland's population nearly tripling since 2000. The Brazosport area has experienced a construction boom since the 2008.

The expansion of the Dow Chemical Plant spurred over \$28 billion in capital investments and the creation of over 3,500 permanent jobs. The deepwater Port Freeport is undergoing an expansion and will be the only terminal capable of receiving Panamax ships on the Texas Coast (Panamax ships are the largest sized ships that are able to pass through the Panama Canal). Brazoria County's agricultural sector produces cattle, hay, rice, soybeans, and other products with an annual output of \$118.2 million; crops represent sixty one percent of the output and livestock thirty-nine percent. Brazoria County ranks fourth in the State of Texas for rice production and fifth in the state for aquaculture.

## Recent Disruptions to the Economy

Brazoria County experienced severe flooding in 2015 (Memorial Day Flood), 2016 (Tax Day Flood), and 2017

(Hurricane Harvey) while still undergoing recovery from 2008's Hurricane Ike. Ike made landfall months before Great Recession (2008-2012).

The regional economy performed better than the national economy during the Great Recession but unemployment spiked from 4.1% in April of 2008 to 9.2% in July of 2009. The collapse in the price of a barrel of oil from over \$100 in 2014 to below \$30 in 2016 did not impact Brazoria County as much as other areas of the region, as Brazoria's economy is concentrated on chemical manufacturing rather than extraction of oil and gas. Brazoria County weathered both downturns through residential construction and medical industry expansion in the northern portion of the county, and industrial construction and petrochemical industry in the Brazosport area.

## Economic Resilience Strategies

Brazoria County's petrochemical industry is a major driver of the regional economy. The industry's expansion is constrained by Brazoria County's non-attainment status under the Clean Air Act. Some businesses and industries find it difficult to compete with the wages offered by the petrochemical industry; making diversification of the economy challenging. The petrochemical industry is well suited to provide the feedstock (raw materials) for manufacturers, especially in plastics.

The county's coastal location makes it particularly vulnerable to the effects of hurricanes, 100% of the county is in the hurricane evacuation zone. It is also vulnerable to flooding, 20% of county residents live in a 100-year floodplain. Enhancing drainage is key to continued growth. The rapid development in the north part of the county presents opportunities to create places that emphasize livability by working with jurisdictions to enhance the quality of the built environment.

## Recommendations

Brazoria County's economy will be better able to withstand, avoid, and recover from disruptions if it is able to:

Recruit manufacturers that could benefit by relocating closer to the source of their materials.

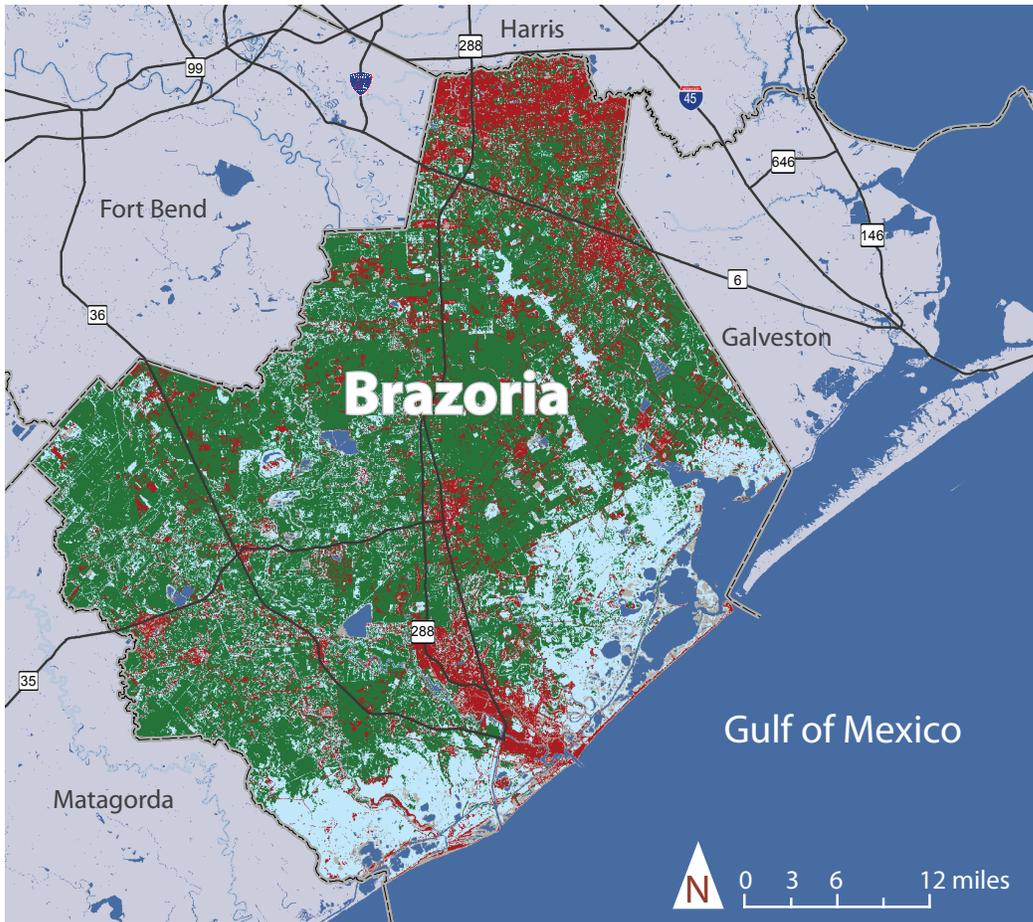
Continue to improve Brazoria County's air-quality through voluntary actions and participation in regional air quality efforts

Investigate potential strategies for better coordinated countywide flood control.

Work with the real estate development community to enhance the quality of residential and commercial development.

Continue to coordinate with the Brazoria-Fort Bend Rail District to enhance freight mobility in the region.

# Land Use and Demographics



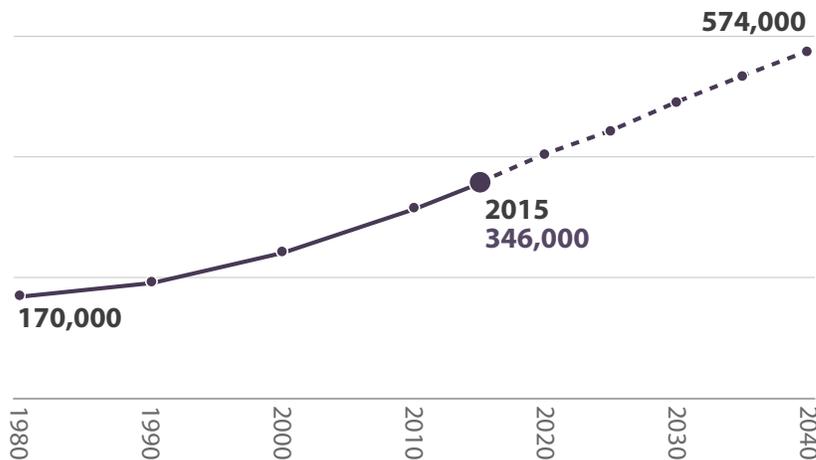
## Brazoria County Land Use



Brazoria County is located on the Gulf of Mexico, and has a large percentage of wetlands along the coast. Urbanized areas include Pearland in the north, Alvin and Angleton in the center of the county, and the Brazosport area in the south.

## Population Growth Forecast

Brazoria County grew by 104% from 1980 to 2015 and is expected to reach 574,000 residents by 2040.



## Top 10 City Populations

The City of Pearland is Brazoria County's largest incorporated municipality.

- 107,574** Pearland\*
- 27,529** Lake Jackson
- 26,164** Alvin
- 19,491** Angleton
- 12,153** Freeport
- 11,586** Clute
- 8,939** Manvel
- 3,933** West Columbia
- 3,898** Richwood
- 3,766** Sweeny

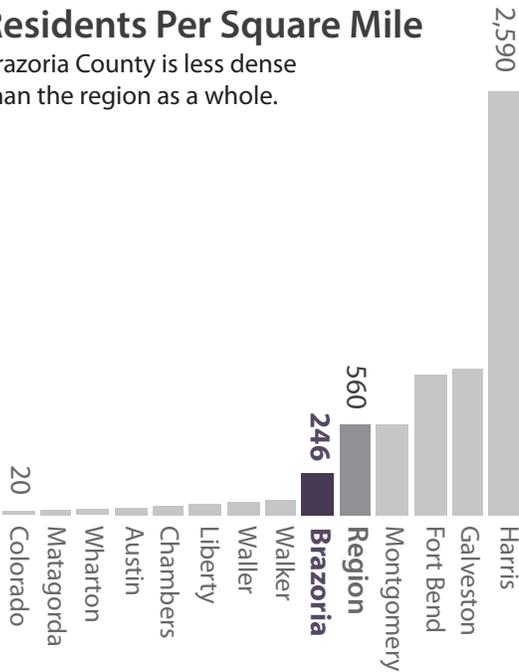
**113,857** Unincorporated

\*The municipality spans multiple counties. Only the population residing in Brazoria County is shown here.

# Land Use and Demographics

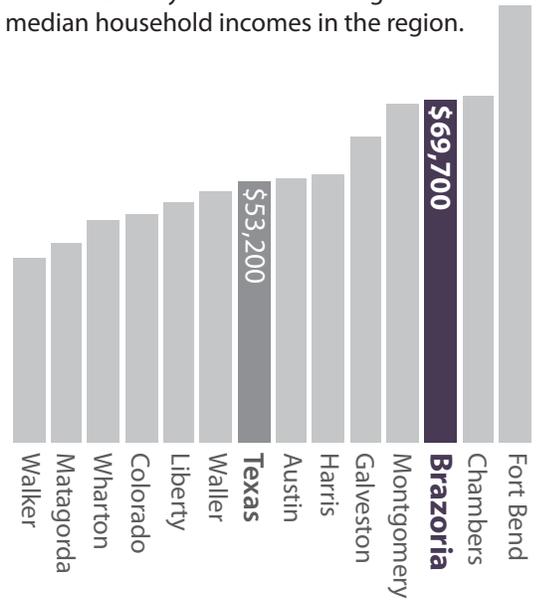
## Residents Per Square Mile

Brazoria County is less dense than the region as a whole.



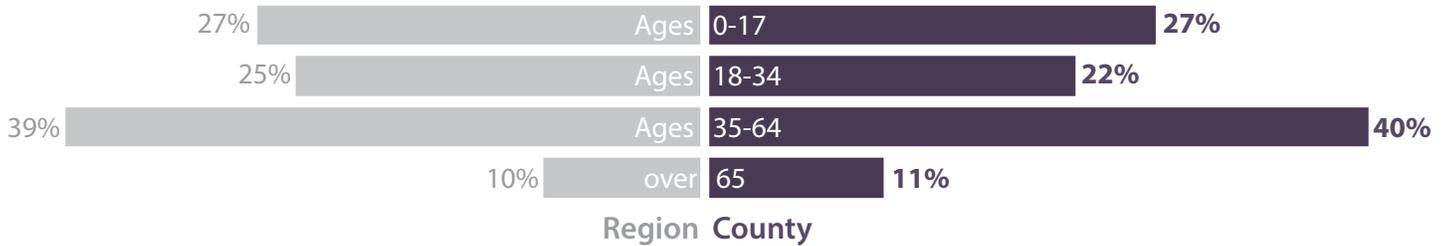
## Median Household In-

Brazoria County has one of the highest median household incomes in the region.



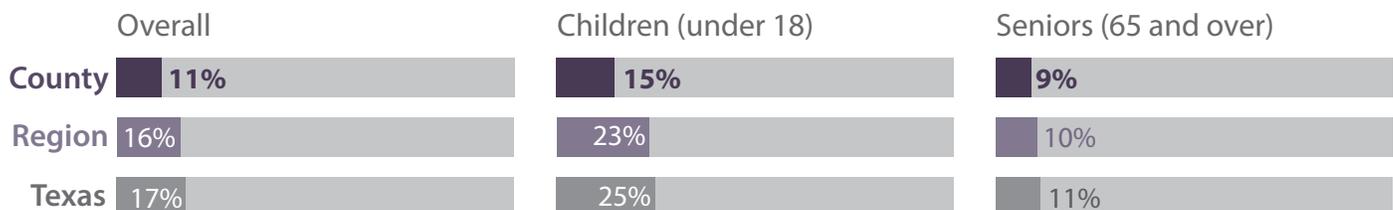
## Age

Brazoria County has a similar age profile as the region.



## Poverty Rate

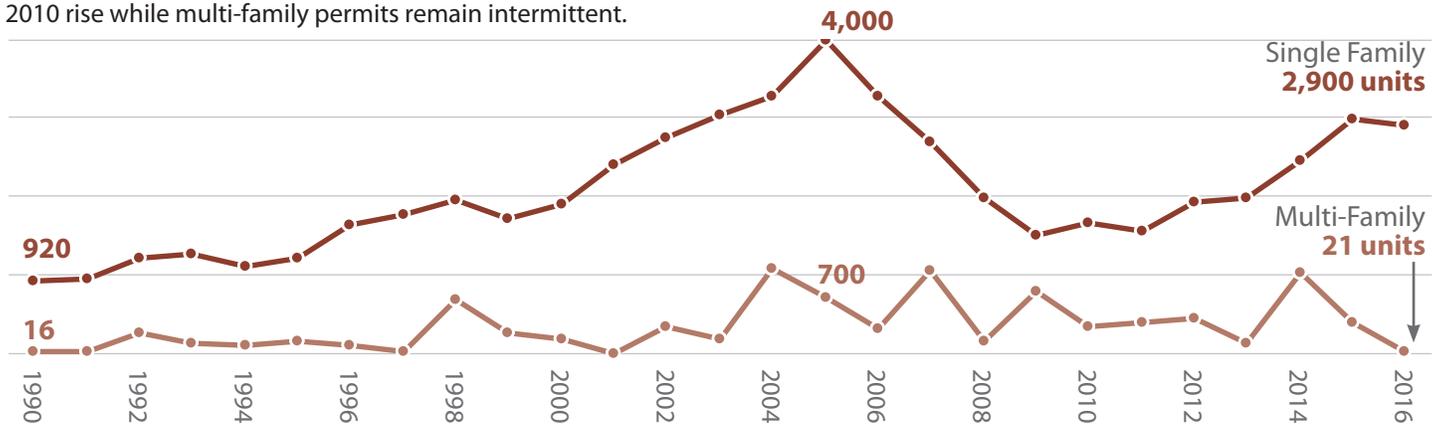
Brazoria County has a lower rate of poverty than the region, particularly for children.



# Housing

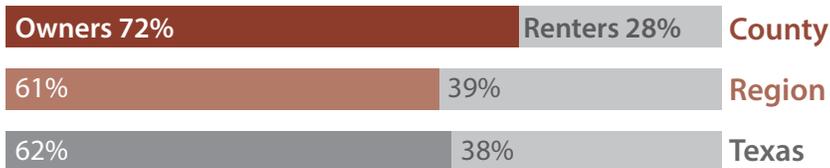
## Building Permits Issued

Single-family construction is staying steady after a post-2010 rise while multi-family permits remain intermittent.



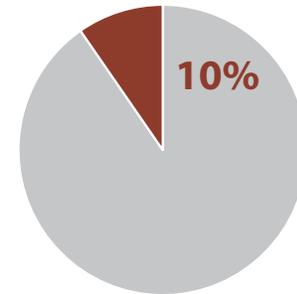
## Housing Tenure

Brazoria County has a higher rate of homeownership than the region or the state.



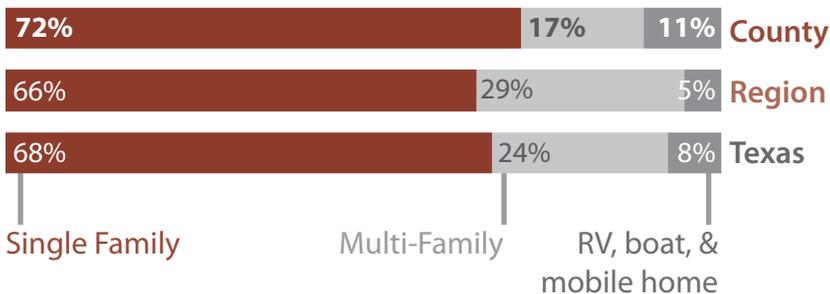
## Vacant Housing Units

Around 10% of Brazoria County's housing units are vacant.



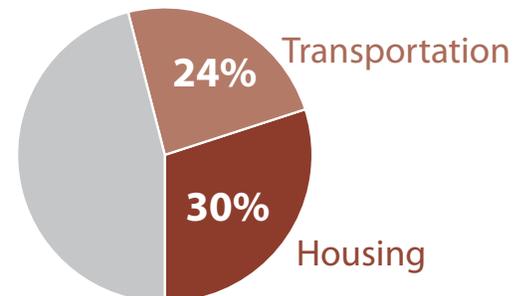
## Housing Type

Brazoria County's homes are mostly single-family residences.



## Living Costs

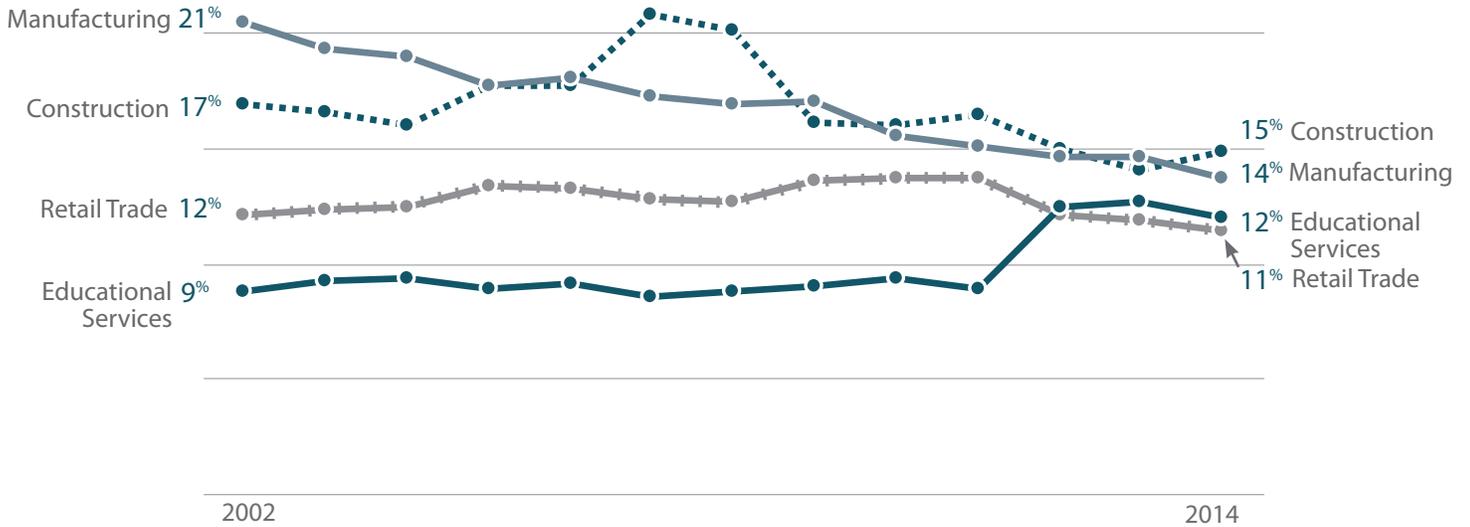
Brazoria County households spend 54% of their income on transportation and housing.



# Economy

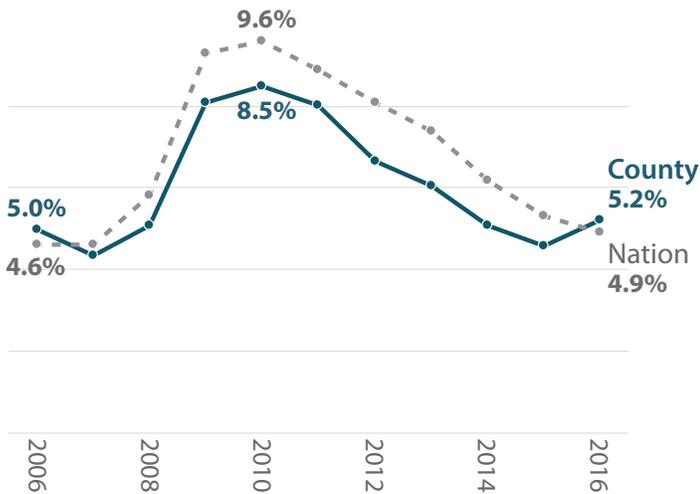
## Top Industries by Percent of Overall Jobs

Employment in Brazoria County diversified between 2002 and 2014. While the Manufacturing and Construction industries declined as a percentage of overall jobs over that period, they still employed about the same number of workers.



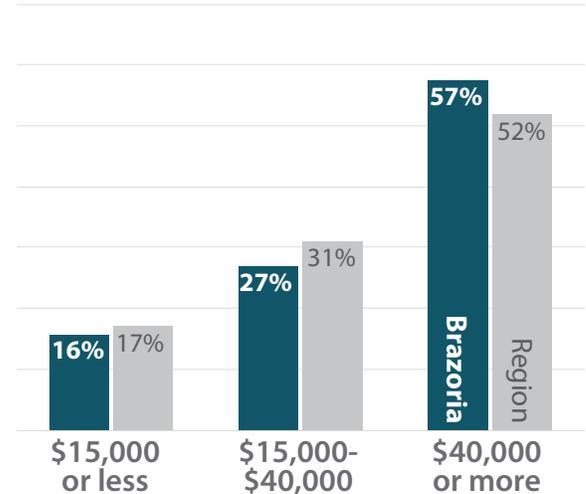
## Unemployment Rate

Brazoria County's unemployment mirrors national trends, and was higher than the nation in 2016.



## Earnings of Residents

Nearly 60% of Brazoria County residents earn more than \$40,000 annually, a higher percentage than the region.



# Education, Hazard Risks, and Commute

## Median Earnings by Educational Attainment

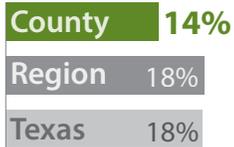
A Brazoria County resident with a graduate or professional degree makes, on average, \$54,700 more than a resident with less than a high school education annually.



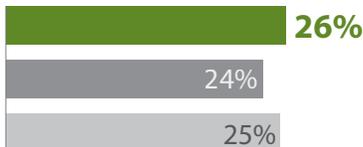
## Educational Attainment

A higher percentage of Brazoria County residents have completed high school than the region and state.

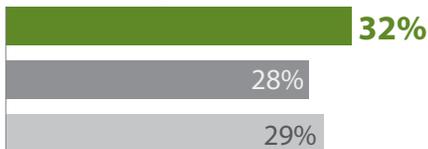
### Less than High School



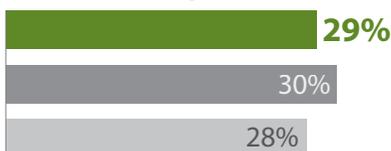
### High School or Equivalent



### Some College or Associate's

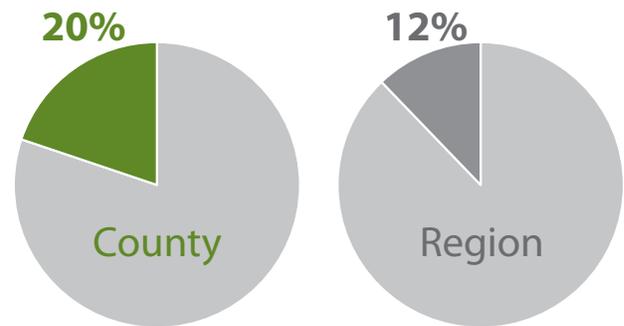


### Bachelor's Degree or More



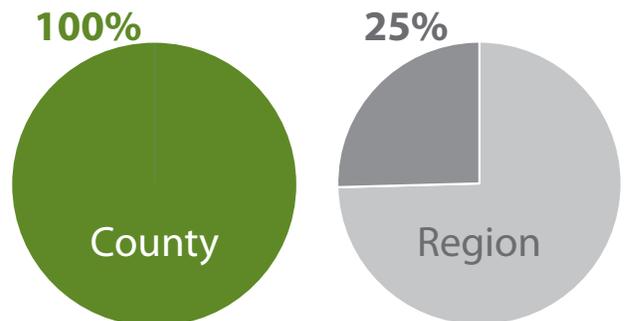
## Residents in 100-year Floodplain

A larger percentage of Brazoria County residents live in a 100-year floodplain than the region.



## Residents in Hurricane Evacuation Zone

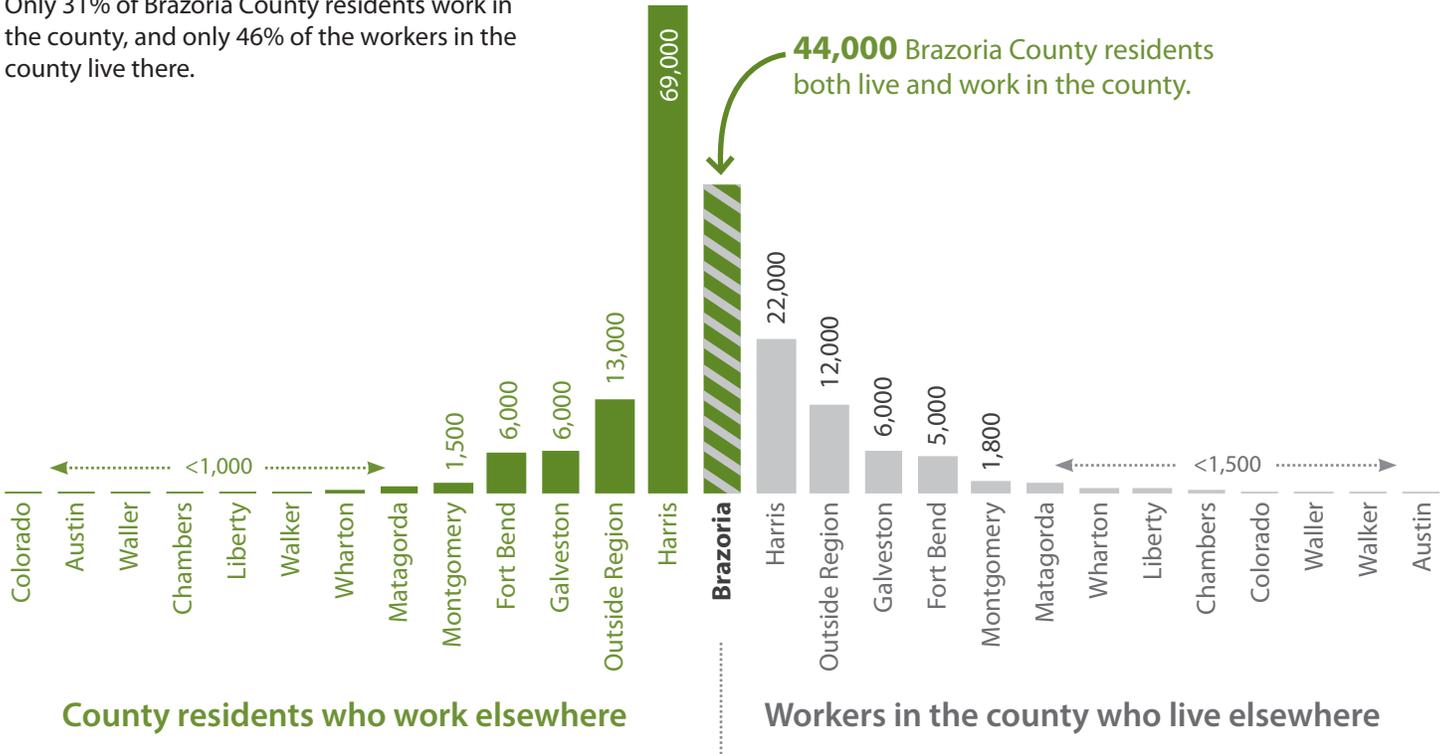
All Brazoria County residents live in a hurricane evacuation zone, as opposed to 25% of the region's residents.



# Education, Hazard Risks, and Commute

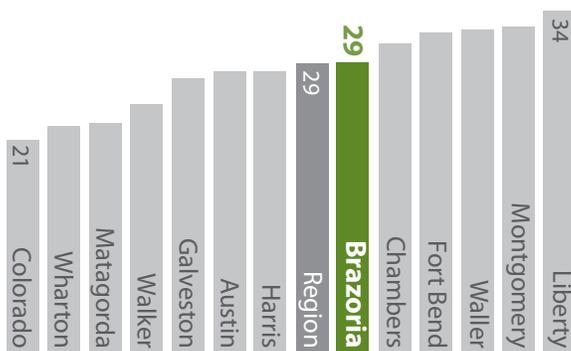
## Workers' Job & Home Destinations

Only 31% of Brazoria County residents work in the county, and only 46% of the workers in the county live there.



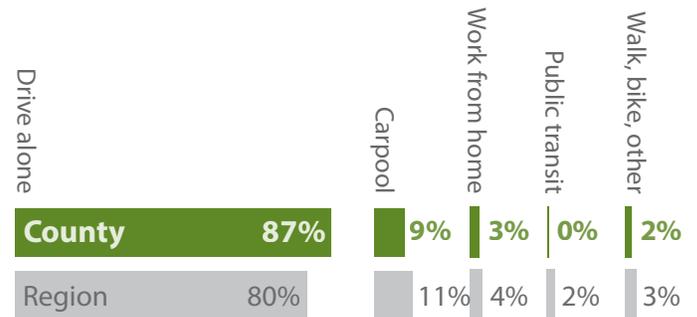
## Mean Commute to Work (minutes)

Brazoria County workers commute for about the same amount of time as the region as a whole.



## Commute Mode to Work

A higher percentage of Brazoria County workers drive to work compared to the region as a whole.



# Economic Clusters

A cluster is a concentration of related businesses that make the area more competitive in those industries. Clusters exist where a set of related industries in a given location reach critical mass. Clusters enhance productivity and spur innovation by bringing together technology, information, specialized talent, competing companies, academic institution, and other organizations.

Traded clusters are groups of related industries that serve markets beyond the region in which they are located. Local clusters, in contrast, consist of industries that serve the local market. They are prevalent in every region of the country, regardless of the competitive advantages of a location.

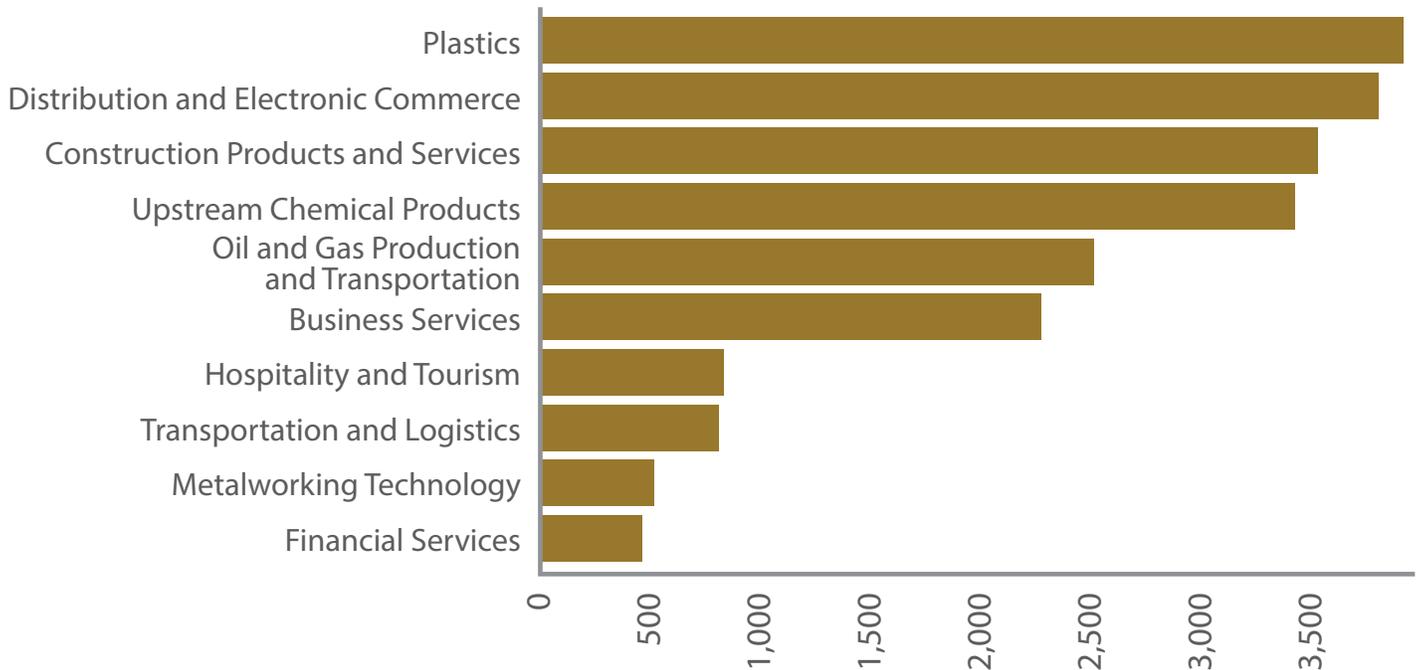
## Traded v. Local Clusters

This diagram demonstrates the county's split between the traded and local sectors of the economy, based on 2014 data from the U.S. Census.



## Employment by Cluster

This bar graph demonstrates Brazoria County's employment by each cluster. It is based on 2014 data from the U.S. Census.



# Local Planning

These plans highlight efforts in Brazoria County to plan for disaster recovery and economic resiliency.

## Brazoria County Hazard Mitigation Plan



Brazoria County is currently developing a Hazard Mitigation Plan for release in 2019. Brazoria County participated in the 2011 Update of the Regional Hazard Mitigation Plan. The Regional Hazard Mitigation plan was created in 2006 by the Houston-Galveston Area Council, the Texas Division of Emergency Management, and 85 local

governments. The comprehensive plan identifies regional hazards and vulnerabilities, and includes over 300 mitigation projects that could be implemented within the region.

The plan identified nine mitigation actions for Brazoria County:

- Acquire and demolish severe repetitive loss properties along 14 miles of the Brazoria County coastline.
- Create a feeder beach for Follett's Island to slow the current erosion rate and protect wetlands in southeast Brazoria County.
- Construct a berm along 14 miles of the Bluewater Highway (CR 257) to reduce impacts from storm surges.
- Implement Treasure Island Revetment project focusing on developing alternatives for a beach nourishment project in the vicinity of the revetment and fishing pier area to widen the beach and provide a buffer to reduce storm impacts to the existing vicinity of the revetment and fishing pier area to widen the beach and provide a buffer to reduce storm impacts to the existing shoreline.
- Evaluate existing gauging stations and flood gates and obtain updated software and hardware.
- Purchase 500 magnetic Burn Ban signs to be displayed on all county vehicles.
- Purchase three years of use of an automated public information system to reach out to county residents prior to and during an emergency.
- Conduct wildfire outreach and education campaign.
- Install sprinkler systems at County's critical facilities constructed on slab foundations to reduce differential shrinking of underlying soils during drought.

## Brazoria County Regional Plan for Public Parks and Sustainable Development: A Case Study



Brazoria County's coastal ecosystem contains some of the highest quality natural areas in the region. Its bottomland forests, rivers, bayous, bays, and coastline provide wildlife habitat and recreational opportunities for residents and visitors alike. Brazoria County Regional Plan for Public Parks and Sustainable Development: A Case Study lays out a coastal master plan for

the Brazoria County Parks Department that contains a new set of management practices to protect the county's coastal natural resources, along with strategies for accommodating new growth in ways that take advantage of the natural landscape. Major recommendations include phased expansion of the public parks system and other public lands and improving access and providing amenities such as trails, kayak launches, and educational displays. Conservation design techniques, such as preserving wildlife habitat within new developments, using native plants in landscape, and using natural systems to help buffer storm surges and store flood waters, are also detailed.

This case study examines the parks in terms of the potential to enhance Brazoria County as a place to live and the potential that these parks have for tourism. One of the goals of the Brazoria County Parks Department is to "enhance recreational and economic health through environmental conservation." The plan also acknowledges the role of open/green space in flood control.

# Data Sources

## Brazoria County Overview

1. U.S. Census Bureau
2. U.S. Census Bureau
3. Economic Development Alliance for Brazoria County
4. USDA Census of Agriculture
5. USDA Census of Agriculture

## Recent Disruptions to the Economy

6. Federal Reserve Bank of Saint Louis, Bureau of Labor Statistics

## Economic Development Strategies

7. Houston-Galveston Area Council
8. Houston-Galveston Area Council

## Graphics

County Boundaries Map. Houston-Galveston Area Council, 2017.

County Land Use Map. Houston-Galveston Area Council, 2017.

Population Growth Forecast. Houston-Galveston Area Council, 2017.

Residents Per Square Mile. Houston-Galveston Area Council, 2017.

Age. U.S. Census Bureau, 2011-2015 American Community Survey, 5-Year Estimates, Table B01001.

Median Household Income. U.S. Census Bureau, 2011-2015 American Community Survey, 5-Year Estimates, Table S2503.

Poverty Rate. U.S. Census Bureau, 2011-2015 American Community

Survey, 5-Year Estimates, Table S1701.

Building Permits Issued. U.S. Census Bureau, Building Permits Survey, 1990-2015.

Housing Tenure. U.S. Census Bureau, 2011-2015 American Community Survey, 5-Year Estimates, Table DP04.

Vacant Housing Units. U.S. Census Bureau, 2011-2015 American Community Survey, 5-Year Estimates, Table DP04.

Housing Type. U.S. Census Bureau, 2011-2015 American Community Survey, 5-Year Estimates, Table DP04.

Living Costs. Center for Neighborhood Technology 2013 H+T® Index.

Top Industries by Percent of Overall Jobs. U.S. Census Bureau, 2002-2014, OnTheMap Application, Longitudinal-Employer Household Dynamics Program.

Unemployment Rate. U.S. Bureau of Labor Statistics, Local Area Unemployment Statistics, 2006-2016.

Earnings of Residents. U.S. Census Bureau, 2014, OnTheMap Application, Longitudinal-Employer Household Dynamics Program.

Median Earnings by Educational Attainment. U.S. Census Bureau, 2011-2015 American Community Survey, 5-Year Estimates, Table B20004.

Educational Attainment. U.S. Census Bureau, 2011-2015 American Community Survey, 5-Year Estimates, Table S1501.

Residents in 100-year Floodplain. Houston-Galveston Area Council, 2017.

Residents in Hurricane Evacuation Zone. Houston-Galveston Area Council, 2017.

Workers' Job & Home Destinations. U.S. Census Bureau, 2014, OnTheMap Application, Longitudinal-Employer Household Dynamics Program.

Mean Commute to Work (minutes). U.S. Census Bureau, 2011-2015 American Community Survey, 5-Year Estimates, Table S0802.